

North Carolina Department of Transportation

Highway Stormwater Program STORMWATER MANAGEMENT PLAN



(Version 2.08; Released April 2018)

STORMWATER MANAGEMENT I FOR NCDOT PROJECTS

WBS Element:		TIP No.:	R-0211EC	Co	ounty(ies):	Mecklenburg				Page	1	of 3	
				Gene	eral Project I	nformation							
WBS Element:					-0211EC		Project	Type:	Roadway Widen	ina	Date:	6/7/2019	
NCDOT Contact:		Malcolm Watson			-	Contractor / Desig			struction/WSP (Ka				
		1020 Birch Ridge	Drive				Address:		head Square Drive				
		Raleigh, NC 2761						Suite 610	·				
		3,7 1 1 1						Charlotte, I					
Phone		(919) 707-6614					Phone:	e: (704) 342-5403					
		mcwatson@ncdo	t aov					` ′	er@wsp.com				
City/Town:		morrate on (c) node		rlotte		County(ies):		Mecklenburg					
River Basin(s):		Cata				CAMA County?		No					
Wetlands within Pro	iect Limits?	Yes											
Wordings Within 10	Joot Limito .			-	Project Desc	rintion							
Project Length (lin. ı	miles or feet):	Project Description 0.8 miles Surrounding Land Use: Urban (residential and commercial)											
		Proposed Project					Existing Site						
Project Built-Upon A	Area (ac.)		14.1	ac	D.		13.7 ac.						
Typical Cross Section		There are severa		or this project in the ty		ed with the Redline	There are 2 e	nere are 2 existing cross section on 485.					
	·	Drainage Plans. Essentially, the project adds toll lanes in the media				. In some cases a	- 3 lanes each	lanes each direction with a paved median from 77- to Johnston Road.					
		ditch section is revised to provide pavement. In other cases a large				aved median is		Then as you travel east its is 2 lanes either direction with a variable width grass					
		reduced to account for this new traffic pattern.					median to US-74.						
Annual Avg Daily Tr	affic (veh/hr/day):	Design/Future	Design/Future: 1592 Yea			2040	Existing:	ng: 1186 Year:				r: 2015	
General Project Nar	rative:	The NCDOT is widening a section of I-485 that lies within the municipal boundaries of the Cities of Charlotte and Matthews. The Design-Build Project I-5507 / R-0211EC / U-								R-0211EC / U-			
(Description of Mini	mization of Water	4714AB will provide an eastbound and westbound Express Lane within the I-485 median from I-77 to US 74 (Independence Boulevard), a distance of approximately 16.6 miles. The project will also provide an I-485 / Weddington Road interchange, and modify the I-485 / East John Street - Old Monroe Road interchange											
The Impacts for R-0211 EC are located on Sheets 60 and 61 of the plan set and are in relation to the widening of 485 that is needed to accomodate a new interchange Weddington Road. Construction will unavoidably impact several streams. Where practicable, 2:1 slopes will be used to minimize impacts. Where culverts are being extended in jurisdictive streams rip rap for stabilization is being installed on banks only. Best Management Practices: *Dry Detention Basin. *Promotion of sheet flow and infiltration with grassed shoulders except were shoulder berm gutter was required. *Drainage systems outlet to rip rap pads or riprap lined ditches. *Riprap on embankments was used to prevent erosion where ditches enter streams.									J				
Surface Water Body	, (1):		Fourmil	le Creek	*	NCDWR Stream In	dox No :			11-137-9-4			
-	. ,		Primary Classification:			Class				11-131-9-4			
NCDWR Surface Water Classification for Water Body				Supplemental Class		Class	<u> </u>					_	
Other Stream Classification:		None											
Impairments:		None											
Aquatic T&E Specie	s?		Comments:										
NRTR Stream ID:		SBF SBE						Buffer Rul	es in Effect:			N/A	
Project Includes Bri	dge Spanning Wate			Deck Drains Discharge Over Buffer?		No	Dissipator Pads Provided in Buffer?		n Buffer?		N/A		
Deck Drains Discha			No			the General Project Narrative)		(If yes, describe in the General Project Narrative; if no,			io, justify in the		
	de justification in the		arrative)	<u></u>					Gene	ral Project Na	rrative)		
		-											



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Preformed Scour Holes and Energy Dissipators										
Sheet No.	Station & Coordinates (Road and Non Road Projects)	Surface Water Body	Energy Dissipator	Riprap Type	Drainage Area (ac)	Conveyance Structure	Pipe/Structure Dimensions (in)	Q10 (cfs)	V10 (fps)	BMP Associated w/ Buffer Rules?
60	-L- 790+50 LT	(1)Fourmile Creek	PSH	Class 'B'	0.7	Pipe	15	3.5	12.3	No
Additional Comments										

* Refer to the NCDOT Best Management Practices Toolbox (2014), NCDOT Standards, the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (July 2006), as applicable, for design guidance and criteria.



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WBS	Element:		TIP No.: R-0211EC	County(ies): Mecklenburg Page 3 of					
Other Best Management Practices									
Sheet No.	Station & Coordinates (Road and Non Road Projects) Y5LPD- 20+00 RT	Surface Water Body	BMP Type	Drainage Area (ac)	New Built-Upon Area (ac)	Volume Treated (ac-ft)	Precipitation Depth Treated over NBUA (in)	BMP Associated w/ Buffer Rules?	
59	Y5LPD- 20+00 RT Weddington Road	Four Mile Creek	Dry Detention Basin	13.8	6.4	0.745	1.47	No	
		-							
		-							
		-							
		-							
			A	dditional Comments					